



March 29, 2012

Brad Davis  
Zia Engineering & Environmental  
755 S Telshor Blvd Ste F-201  
Las Cruces, NM 88011  
TEL: (575) 993-6824  
FAX (575) 532-1587  
RE: HELSTF TSA

Order No.: 1203176

Dear Brad Davis:

DHL Analytical received 7 sample(s) on 3/17/2012 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of DoD QSM Ver 4.2 and NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. This report shall not be reproduced except in full without the written approval of DHL Analytical, Inc. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in black ink, appearing to read "John DuPont".

John DuPont  
General Manager

This report was performed under the accreditation of the State of Texas & DoD Laboratory Certification Number: T104704211-11-7 & DoD ELAP #ADE-1416 v2



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755 S. Tebbel Bld. Ste. F-201  
Las Cruces, NM 88011  
575-532-1526 u  
575-532-1587 f

### CHAIN OF CUSTODY RECORD

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[illegible]

PLEASE USE BALL POINT PEN

DISTRIBUTION: WHITE - PROJECT FILES; YELLOW - L&E; PINK - FIELD COPY

From: (505) 532-1526  
Zia Engineering

Origin ID: LRUA



J12101112180225

SHIP TO: (512) 778-7223  
Jennifer Barker

BILL SENDER

1005 HOWELL TERRACE PL

ROUND ROCK, TX 78664

Ship Date: 16MAR12  
Act/Ngt: 15.0 LB  
CAD: 102287640/INET3258

Delivery Address Bar Code



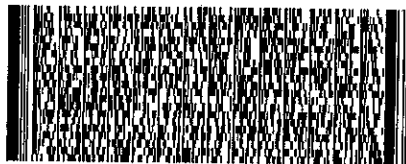
Ref # LCS-09-015/BG 33  
Invoice #  
PO #  
Dept #

### SATURDAY ### A1  
PRIORITY OVERNIGHT

TRK# 7981 7978 2953  
0201

**X0 BSMA**

RES  
78664  
TX-US  
AUS



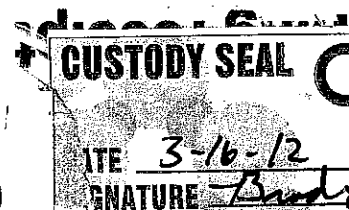
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## Sample Receipt Checklist

Client Name Zia Engineering &amp; Environmental

Date Received: 3/17/2012

Work Order Number 1203176

Received by JB

Checklist completed by: [Signature] 3/19/2012

Signature

Date

Reviewed by [Initials] 3/19/2012

Initials

Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5.6 °C
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Any No response must be detailed in the comments section below.

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

# DHL Analytical, Inc.

## Laboratory Review Checklist: Reportable Data

<b>Project Name:</b> HELSTF TSA		<b>Date:</b> 3/29/2012					
<b>Reviewer Name:</b> Angie O'Donnell		<b>Laboratory Work Order:</b> 1203176					
<b>Prep Batch Number(s):</b> See Prep Dates Report		<b>Run Batch:</b> See Analytical Dates Report					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-Custody (C-O-C)</b>					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				R1-01
		2) Were all departures from standard conditions described in an exception report?			X		
R2	OI	<b>Sample and Quality Control (QC) Identification</b>					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test Reports</b>					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	<b>Surrogate Recovery Data</b>					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	<b>Test Reports/Summary Forms for Blank Samples</b>					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory Control Samples (LCS):</b>					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?			X		
R7	OI	<b>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data</b>					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	<b>Analytical Duplicate Data</b>					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	<b>Method Quantitation Limits (MQLs):</b>					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	<b>Other Problems/Anomalies</b>					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

3 NA = Not applicable.

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

**DHL Analytical, Inc.**
**Laboratory Review Checklist (continued): Supporting Data**

<b>Project Name:</b> HELSTF TSA		<b>Date:</b> 3/29/2012					
<b>Reviewer Name:</b> Angie O'Donnell		<b>Laboratory Work Order:</b> 1203176					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
<b>S1</b>	<b>OI</b>	<b>Initial Calibration (ICAL)</b>					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
<b>S2</b>	<b>OI</b>	<b>Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB)</b>					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
<b>S3</b>	<b>O</b>	<b>Mass Spectral Tuning</b>					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
<b>S4</b>	<b>O</b>	<b>Internal Standards (IS)</b>					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
<b>S5</b>	<b>OI</b>	<b>Raw Data (NELAC section 1 appendix A glossary, and section 5.12)</b>					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
<b>S6</b>	<b>O</b>	<b>Dual Column Confirmation</b>					
		1) Did dual column confirmation results meet the method-required QC?			X		
<b>S7</b>	<b>O</b>	<b>Tentatively Identified Compounds (TICs)</b>					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
<b>S8</b>	<b>I</b>	<b>Interference Check Sample (ICS) Results</b>					
		1) Were percent recoveries within method QC limits?			X		
<b>S9</b>	<b>I</b>	<b>Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions</b>					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
<b>S10</b>	<b>OI</b>	<b>Method Detection Limit (MDL) Studies</b>					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSSs?	X				
<b>S11</b>	<b>OI</b>	<b>Proficiency Test Reports</b>					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
<b>S12</b>	<b>OI</b>	<b>Standards Documentation</b>					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
<b>S13</b>	<b>OI</b>	<b>Compound/Analyte Identification Procedures</b>					
		1) Are the procedures for compound/analyte identification documented?	X				
<b>S14</b>	<b>OI</b>	<b>Demonstration of Analyst Competency (DOC)</b>					
		1) Was DOC conducted consistent with NELAC Chapter 5C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
<b>S15</b>	<b>OI</b>	<b>Verification/Validation Documentation for Methods (NELAC Chap 5)</b>					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
<b>S16</b>	<b>OI</b>	<b>Laboratory Standard Operating Procedures (SOPs)</b>					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

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3 NA = Not applicable.

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Data Package Signature Page

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

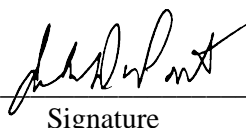
- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC 5.13
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
- R10 Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

**Release Statement:** I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

John DuPont – General Manager

Scott Schroeder – Technical Director



Signature

03/29/12

Date

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF TSA  
**Lab Order:** 1203176

**CASE NARRATIVE**

---

This case narrative describes abnormalities and deviations that may affect the results and summarizes all known issues that need to be highlighted for the data user to assess the results. This case narrative and the report contents are compliant with DoD QSM Ver 4.2 and NELAC.

Method SW8260C - Volatile Organics

Exception Report R1-01

The samples were received and log-in performed on 3/17/2012. A total of 7 samples were received and all were analyzed. The samples arrived in good condition and were properly packaged.

A summary of project communication follows:

DHL Analytical received the Project RFQ from the client on 12/29/09. Completed RFQ returned to client via email on 1/07/2010. Purchase Order/Terms and Conditions received and signed and approved by both parties on 01/25/2010.

Brad Davis of Zia requested a bottle kit via email from Jennifer Barker of DHL on 2/16/2012. A DHL BottleKit #3136 sent on 2/20/2012 via Lonestar Overnight, to arrive by 2/22/2012.

This sample delivery group arrived at DHL Analytical 3/17/12. Sample summary sent via email from Log-in to client on 3/17/12.

All hardcopies for the sample kit request, bill of lading for sample kit sent and login summary are kept in project folder.

---

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF TSA  
**Lab Order:** 1203176**Work Order Sample Summary**

---

<b>Lab Smp ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Date Collected</b>	<b>Date Recved</b>
1203176-01	HTSA-0197-HMW-049-0312		03/16/12 10:00 AM	3/17/2012
1203176-02	HTSA-0197-HMW-149-0312		03/16/12 10:00 AM	3/17/2012
1203176-03	HTSA-0197-FB-001-0312		03/16/12 10:00 AM	3/17/2012
1203176-04	HTSA-0197-HMW-TB-1-0312		03/16/12 10:00 AM	3/17/2012
1203176-05	HTSA-0197-HMW-050-0312		03/16/12 11:35 AM	3/17/2012
1203176-06	HTSA-0197-RB-001-0312		03/16/12 11:55 AM	3/17/2012
1203176-07	HTSA-0197-HMW-048-0312		03/16/12 01:25 PM	3/17/2012

**Lab Order:** 1203176  
**Client:** Zia Engineering & Environmental  
**Project:** HELSTF TSA

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1203176-01A	HTSA-0197-HMW-049-0312	03/16/12 10:00 AM	Aqueous	SW5030C	Purge and Trap Water GC/MS	03/21/12 01:35 PM	51075
1203176-02A	HTSA-0197-HMW-149-0312	03/16/12 10:00 AM	Aqueous	SW5030C	Purge and Trap Water GC/MS	03/21/12 01:35 PM	51075
1203176-03A	HTSA-0197-FB-001-0312	03/16/12 10:00 AM	Field Blank	SW5030C	Purge and Trap Water GC/MS	03/21/12 01:35 PM	51075
1203176-04A	HTSA-0197-HMW-TB-1-0312	03/16/12 10:00 AM	Trip Blank	SW5030C	Purge and Trap Water GC/MS	03/21/12 01:35 PM	51075
1203176-05A	HTSA-0197-HMW-050-0312	03/16/12 11:35 AM	Aqueous	SW5030C	Purge and Trap Water GC/MS	03/21/12 01:35 PM	51075
1203176-06A	HTSA-0197-RB-001-0312	03/16/12 11:55 AM	Equip Blank	SW5030C	Purge and Trap Water GC/MS	03/21/12 01:35 PM	51075
1203176-07A	HTSA-0197-HMW-048-0312	03/16/12 01:25 PM	Aqueous	SW5030C	Purge and Trap Water GC/MS	03/21/12 01:35 PM	51075

**Lab Order:** 1203176  
**Client:** Zia Engineering & Environmental  
**Project:** HELSTF TSA

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1203176-01A	HTSA-0197-HMW-049-0312	Aqueous	SW8260C	8260 Water Volatiles by GC/MS	51075	1	03/21/12 09:16 PM	GCMS7_120321A
1203176-02A	HTSA-0197-HMW-149-0312	Aqueous	SW8260C	8260 Water Volatiles by GC/MS	51075	1	03/21/12 09:40 PM	GCMS7_120321A
1203176-03A	HTSA-0197-FB-001-0312	Field Blank	SW8260C	8260 Water Volatiles by GC/MS	51075	1	03/21/12 10:04 PM	GCMS7_120321A
1203176-04A	HTSA-0197-HMW-TB-1-0312	Trip Blank	SW8260C	8260 Water Volatiles by GC/MS	51075	1	03/21/12 10:29 PM	GCMS7_120321A
1203176-05A	HTSA-0197-HMW-050-0312	Aqueous	SW8260C	8260 Water Volatiles by GC/MS	51075	1	03/21/12 02:43 PM	GCMS7_120321A
1203176-06A	HTSA-0197-RB-001-0312	Equip Blank	SW8260C	8260 Water Volatiles by GC/MS	51075	1	03/21/12 10:54 PM	GCMS7_120321A
1203176-07A	HTSA-0197-HMW-048-0312	Aqueous	SW8260C	8260 Water Volatiles by GC/MS	51075	1	03/21/12 11:18 PM	GCMS7_120321A

**DHL Analytical**

Date: 29-Mar-12

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF TSA  
**Project No:**  
**Lab Order:** 1203176

**Client Sample ID:** HTSA-0197-HMW-049-0312  
**Lab ID:** 1203176-01  
**Collection Date:** 03/16/12 10:00 AM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>		Analyst: <b>KL</b>			
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 09:16 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	03/21/12 09:16 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 09:16 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 09:16 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 09:16 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 09:16 PM
Surr: 1,2-Dichloroethane-d4	115	0	70-120		%REC	1	03/21/12 09:16 PM
Surr: 4-Bromofluorobenzene	113	0	75-120		%REC	1	03/21/12 09:16 PM
Surr: Dibromofluoromethane	107	0	85-115		%REC	1	03/21/12 09:16 PM
Surr: Toluene-d8	103	0	85-120		%REC	1	03/21/12 09:16 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

**DHL Analytical**

Date: 29-Mar-12

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF TSA  
**Project No:**  
**Lab Order:** 1203176

**Client Sample ID:** HTSA-0197-HMW-149-0312  
**Lab ID:** 1203176-02  
**Collection Date:** 03/16/12 10:00 AM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>				Analyst: <b>KL</b>	
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 09:40 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	03/21/12 09:40 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 09:40 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 09:40 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 09:40 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 09:40 PM
Surr: 1,2-Dichloroethane-d4	103	0	70-120		%REC	1	03/21/12 09:40 PM
Surr: 4-Bromofluorobenzene	106	0	75-120		%REC	1	03/21/12 09:40 PM
Surr: Dibromofluoromethane	92.7	0	85-115		%REC	1	03/21/12 09:40 PM
Surr: Toluene-d8	103	0	85-120		%REC	1	03/21/12 09:40 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

**DHL Analytical**

Date: 29-Mar-12

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF TSA  
**Project No:**  
**Lab Order:** 1203176

**Client Sample ID:** HTSA-0197-FB-001-0312  
**Lab ID:** 1203176-03  
**Collection Date:** 03/16/12 10:00 AM  
**Matrix:** FIELD BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>				Analyst: <b>KL</b>	
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 10:04 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	03/21/12 10:04 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 10:04 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 10:04 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 10:04 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 10:04 PM
Surr: 1,2-Dichloroethane-d4	105	0	70-120		%REC	1	03/21/12 10:04 PM
Surr: 4-Bromofluorobenzene	101	0	75-120		%REC	1	03/21/12 10:04 PM
Surr: Dibromofluoromethane	105	0	85-115		%REC	1	03/21/12 10:04 PM
Surr: Toluene-d8	102	0	85-120		%REC	1	03/21/12 10:04 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

**DHL Analytical**

Date: 29-Mar-12

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF TSA  
**Project No:**  
**Lab Order:** 1203176

**Client Sample ID:** HTSA-0197-HMW-TB-1-0312  
**Lab ID:** 1203176-04  
**Collection Date:** 03/16/12 10:00 AM  
**Matrix:** TRIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>				Analyst: <b>KL</b>	
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 10:29 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	03/21/12 10:29 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 10:29 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 10:29 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 10:29 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 10:29 PM
Surr: 1,2-Dichloroethane-d4	104	0	70-120		%REC	1	03/21/12 10:29 PM
Surr: 4-Bromofluorobenzene	106	0	75-120		%REC	1	03/21/12 10:29 PM
Surr: Dibromofluoromethane	94.9	0	85-115		%REC	1	03/21/12 10:29 PM
Surr: Toluene-d8	103	0	85-120		%REC	1	03/21/12 10:29 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

**DHL Analytical**

Date: 29-Mar-12

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF TSA  
**Project No:**  
**Lab Order:** 1203176

**Client Sample ID:** HTSA-0197-HMW-050-0312  
**Lab ID:** 1203176-05  
**Collection Date:** 03/16/12 11:35 AM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>		Analyst: <b>KL</b>			
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 02:43 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	03/21/12 02:43 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 02:43 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 02:43 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 02:43 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 02:43 PM
Surr: 1,2-Dichloroethane-d4	103	0	70-120		%REC	1	03/21/12 02:43 PM
Surr: 4-Bromofluorobenzene	107	0	75-120		%REC	1	03/21/12 02:43 PM
Surr: Dibromofluoromethane	96.9	0	85-115		%REC	1	03/21/12 02:43 PM
Surr: Toluene-d8	104	0	85-120		%REC	1	03/21/12 02:43 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

**DHL Analytical**

Date: 29-Mar-12

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF TSA  
**Project No:**  
**Lab Order:** 1203176

**Client Sample ID:** HTSA-0197-RB-001-0312  
**Lab ID:** 1203176-06  
**Collection Date:** 03/16/12 11:55 AM  
**Matrix:** EQUIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>		Analyst: <b>KL</b>			
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 10:54 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	03/21/12 10:54 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 10:54 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 10:54 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 10:54 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 10:54 PM
Surr: 1,2-Dichloroethane-d4	102	0	70-120		%REC	1	03/21/12 10:54 PM
Surr: 4-Bromofluorobenzene	105	0	75-120		%REC	1	03/21/12 10:54 PM
Surr: Dibromofluoromethane	96.2	0	85-115		%REC	1	03/21/12 10:54 PM
Surr: Toluene-d8	96.4	0	85-120		%REC	1	03/21/12 10:54 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

**DHL Analytical**

Date: 29-Mar-12

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF TSA  
**Project No:**  
**Lab Order:** 1203176

**Client Sample ID:** HTSA-0197-HMW-048-0312  
**Lab ID:** 1203176-07  
**Collection Date:** 03/16/12 01:25 PM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>		Analyst: <b>KL</b>			
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 11:18 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	03/21/12 11:18 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 11:18 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 11:18 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/21/12 11:18 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/21/12 11:18 PM
Surr: 1,2-Dichloroethane-d4	106	0	70-120		%REC	1	03/21/12 11:18 PM
Surr: 4-Bromofluorobenzene	117	0	75-120		%REC	1	03/21/12 11:18 PM
Surr: Dibromofluoromethane	97.9	0	85-115		%REC	1	03/21/12 11:18 PM
Surr: Toluene-d8	104	0	85-120		%REC	1	03/21/12 11:18 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

Page 7 of 7

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1203176  
**Project:** HELSTF TSA

**ANALYTICAL QC SUMMARY REPORT****RunID: GCMS7\_120321A**

The QC data in batch 51075 applies to the following samples: 1203176-01A, 1203176-02A, 1203176-03A, 1203176-04A, 1203176-05A, 1203176-06A, 1203176-07A

Sample ID: <b>LCS-51075</b>	Batch ID: <b>51075</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>LCS</b>	Run ID: <b>GCMS7_120321A</b>	Analysis Date: <b>3/21/2012 1:54:00 PM</b>	Prep Date: <b>3/21/2012</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0214	0.00100	0.0232	0	92.2	80	120			
Ethylbenzene	0.0228	0.00100	0.0232	0	98.1	75	125			
m,p-Xylene	0.0468	0.00200	0.0464	0	101	75	130			
Methyl tert-butyl ether	0.0232	0.00100	0.0232	0	99.8	65	125			
o-Xylene	0.0225	0.00100	0.0232	0	97.1	80	120			
Toluene	0.0205	0.00200	0.0232	0	88.4	75	120			
Surr: 1,2-Dichloroethane-d4	202		200.0		101	70	120			
Surr: 4-Bromofluorobenzene	210		200.0		105	75	120			
Surr: Dibromofluoromethane	207		200.0		103	85	115			
Surr: Toluene-d8	206		200.0		103	85	120			

Sample ID: <b>MB-51075</b>	Batch ID: <b>51075</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>MBLK</b>	Run ID: <b>GCMS7_120321A</b>	Analysis Date: <b>3/21/2012 2:19:00 PM</b>	Prep Date: <b>3/21/2012</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000200	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
Methyl tert-butyl ether	<0.000300	0.00100								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	208		200.0		104	70	120			
Surr: 4-Bromofluorobenzene	216		200.0		108	75	120			
Surr: Dibromofluoromethane	196		200.0		98.0	85	115			
Surr: Toluene-d8	206		200.0		103	85	120			

Sample ID: <b>1203176-05AMS</b>	Batch ID: <b>51075</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>MS</b>	Run ID: <b>GCMS7_120321A</b>	Analysis Date: <b>3/21/2012 3:32:00 PM</b>	Prep Date: <b>3/21/2012</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0205	0.00100	0.0232	0	88.5	80	120			
Ethylbenzene	0.0222	0.00100	0.0232	0	95.5	75	125			
m,p-Xylene	0.0455	0.00200	0.0464	0	98.0	75	130			
Methyl tert-butyl ether	0.0224	0.00100	0.0232	0	96.6	65	125			
o-Xylene	0.0223	0.00100	0.0232	0	96.2	80	120			
Toluene	0.0195	0.00200	0.0232	0	84.2	75	120			
Surr: 1,2-Dichloroethane-d4	205		200.0		103	70	120			
Surr: 4-Bromofluorobenzene	200		200.0		99.9	75	120			

**Qualifiers:** B Analyte detected in the associated Method Blank  
J Analyte detected between MDL and RL  
ND Not Detected at the Method Detection Limit  
RL Reporting Limit  
J Analyte detected between SDL and RL

DF Dilution Factor  
MDL Method Detection Limit  
R RPD outside accepted control limits  
S Spike Recovery outside control limits  
N Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1203176  
**Project:** HELSTF TSA

## ANALYTICAL QC SUMMARY REPORT

**RunID:** GCMS7\_120321A

Sample ID: 1203176-05AMS	Batch ID: 51075	TestNo: SW8260C	Units: mg/L							
SampType: MS	Run ID: GCMS7_120321A	Analysis Date: 3/21/2012 3:32:00 PM	Prep Date: 3/21/2012							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	201		200.0		100	85	115			
Surr: Toluene-d8	209		200.0		105	85	120			

Sample ID: <b>1203176-05AMSD</b>	Batch ID: <b>51075</b>	TestNo: <b>SW8260C</b>				Units: <b>mg/L</b>				
SampType: <b>MSD</b>	Run ID: <b>GCMS7_120321A</b>	Analysis Date: <b>3/21/2012 3:57:00 PM</b>				Prep Date: <b>3/21/2012</b>				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0218	0.00100	0.0232	0	94.0	80	120	5.95	30	
Ethylbenzene	0.0218	0.00100	0.0232	0	94.1	75	125	1.46	30	
m,p-Xylene	0.0442	0.00200	0.0464	0	95.3	75	130	2.77	30	
Methyl tert-butyl ether	0.0232	0.00100	0.0232	0	100	65	125	3.55	30	
o-Xylene	0.0219	0.00100	0.0232	0	94.4	80	120	1.95	30	
Toluene	0.0195	0.00200	0.0232	0	84.1	75	120	0.051	30	
Surr: 1,2-Dichloroethane-d4	218		200.0		109	70	120	0	0	
Surr: 4-Bromofluorobenzene	196		200.0		98.1	75	120	0	0	
Surr: Dibromofluoromethane	204		200.0		102	85	115	0	0	
Surr: Toluene-d8	207		200.0		103	85	120	0	0	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1203176  
**Project:** HELSTF TSA

## ANALYTICAL QC SUMMARY REPORT

**RunID:** GCMS7\_120321A

Sample ID: <b>ICV2-120321</b>	Batch ID: <b>R59702</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>GCMS7_120321A</b>	Analysis Date: <b>3/21/2012 1:30:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0410	0.00100	0.0464	0	88.4	80	120			
Ethylbenzene	0.0438	0.00100	0.0464	0	94.3	80	120			
m,p-Xylene	0.0886	0.00200	0.0928	0	95.5	80	120			
Methyl tert-butyl ether	0.0462	0.00100	0.0464	0	99.6	80	120			
o-Xylene	0.0442	0.00100	0.0464	0	95.2	80	120			
Toluene	0.0394	0.00200	0.0464	0	84.9	80	120			
Surr: 1,2-Dichloroethane-d4	199		200.0		99.7	70	120			
Surr: 4-Bromofluorobenzene	215		200.0		107	75	120			
Surr: Dibromofluoromethane	184		200.0		92.0	85	115			
Surr: Toluene-d8	210		200.0		105	85	120			

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

**Lab Order:** 1203176  
**Client:** Zia Engineering & Environmental  
**Project:** HELSTF TSA

## Sequence Report

**Run ID: GCMS7\_120321A**

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
ICV2-120321	-----	SW8260C	R59702	1	3/21/2012 1:30:00 PM		A
LCS-51075	-----	SW8260C	51075	1	3/21/2012 1:54:00 PM	3/21/2012 1:35:01 PM	A
MB-51075	-----	SW8260C	51075	1	3/21/2012 2:19:00 PM	3/21/2012 1:35:01 PM	A
1203176-05A	HTSA-0197-HMW-050-0312	SW8260C	51075	1	3/21/2012 2:43:00 PM	3/21/2012 1:35:01 PM	A
1203176-05AMS	HTSA-0197-HMW-050-0312MS	SW8260C	51075	1	3/21/2012 3:32:00 PM	3/21/2012 1:35:01 PM	A
1203176-05AMSD	HTSA-0197-HMW-050-	SW8260C	51075	1	3/21/2012 3:57:00 PM	3/21/2012 1:35:01 PM	A
1203176-01A	HTSA-0197-HMW-049-0312	SW8260C	51075	1	3/21/2012 9:16:00 PM	3/21/2012 1:35:01 PM	A
1203176-02A	HTSA-0197-HMW-149-0312	SW8260C	51075	1	3/21/2012 9:40:00 PM	3/21/2012 1:35:01 PM	A
1203176-03A	HTSA-0197-FB-001-0312	SW8260C	51075	1	3/21/2012 10:04:00 PM	3/21/2012 1:35:01 PM	F
1203176-04A	HTSA-0197-HMW-TB-1-0312	SW8260C	51075	1	3/21/2012 10:29:00 PM	3/21/2012 1:35:01 PM	T
1203176-06A	HTSA-0197-RB-001-0312	SW8260C	51075	1	3/21/2012 10:54:00 PM	3/21/2012 1:35:01 PM	E
1203176-07A	HTSA-0197-HMW-048-0312	SW8260C	51075	1	3/21/2012 11:18:00 PM	3/21/2012 1:35:01 PM	A